

**REMARKS**

Responsive to the Office Action mailed 12 May 2008, the present paper is timely filed on or before 12 August 2008. By the present paper, claims 1 and 2 are canceled, claims 3, 5, 7, 8, and 10 are amended, and new claim 17 is added.

- 5 Accordingly, claims 3 - 17 are in the Application. Furthermore, the title and specification are amended as required by the Office Action and a substitute Oath and Declaration is submitted herewith. Entry of the Amendments and reconsideration of the Application are respectfully requested.

*The Title Amendments:*

- 10 The title, as amended, conforms to the title on the Application Data Sheet. Applicants respectfully submit that the title accurately reflects the subject matter of the Application as it would be understood by one skilled in the relevant art in the United States.

*The Specification Amendments:*

- 15 The specification is amended as required in the Office Action. Applicants respectfully submit that the amendments do not introduce new matter into the Application.

*The New Claims:*

New claim 17 is added. Claim 17 includes the elements of original claims

1 and 2, with phrasing changed to point-out with even greater particularity that which Applicants consider as their invention. Accordingly, Applicants respectfully submit that support for new claim 17 can be found in the claims as filed. Applicants respectfully submit that new claim 17 does not introduce new matter into the Application.

*The Claim Amendments:*

Claim 3 is amended to correct dependency required by cancellation of claim 2 and to delete a redundant phrase. Support for the amendment can be found at, for example, the claims as filed.

Claim 5 is amended to correct an obvious scrivener's error.

Claim 7 is amended to point-out with even greater particularity that the pH of the flocculant can be 2 - 3. Support for the amendment can be found in the specification at, for example, page 3, line 10.

Claim 8 is amended to point-out with even greater particularity that which Applicants consider to be their inventive method and to further improve the readability of the claim. Support for the claim amendments can be found, for example, in the claims as filed.

Claim 10 is amended to make the phrasing thereof consistent with that of claim 8, from which claim 10 ultimately depends.

Claim 12 is amended to make the phrasing thereof consistent with that of claim 8, from which claim 12 ultimately depends.

Applicants respectfully submit that the claim amendments do not introduce new matter into the Application.

Claim Rejections Under 35 U.S.C. § 112, paragraph first:

Claim 5 was rejected under 35 U.S.C. § 112, first paragraph because, it is alleged, the term “ammonium chloride” in the claim is unsupported because of an alleged ambiguity in the specification. Applicants respectfully submit that the present amendments to the specification remove any ambiguity that may have existed and that the rejection should be withdrawn.

Claim Rejections Under 35 U.S.C. § 102:

Claim 1 was rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Yasuhiro, JP 2001-104711. Applicants respectfully submit that cancellation of claim 1 renders the rejection moot.

Claim 1 was rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Poncelet et al., U.S. 5,888,711. Applicants respectfully submit that cancellation of claim 1 renders the rejection moot.

Claims 1 - 4 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Tsutomu et al. JP315107. Because Tsutomu et al. does not

disclose all of the elements of Applicants, claims, arranged as applicant have arranged them, Applicants respectfully traverse.

Applicants turn first to the rejection of claims 1 and 2, the elements of which are combined in new claim 17. Accepting *arguendo* the Office's characterization of Tsutomo, applicants respectfully point-out that Applicant's claim 17 requires that the silicon-containing material and the alkaline substance are initially separate, then mixed, and after mixing heat-treated at a temperature no higher than the melting point of the silicon-containing material.

To anticipate, a reference must disclose each and every element of a claim, arranged as recited in the claim. *See* M.P.E.P. § 2131. According to the Office's characterization, one or more of the components of the flocculant disclosed by Tsutomo is obtained *via* slag and, accordingly, would have necessarily been "heat treated" at a temperature above the melting point of any "silicon-containing material" present. Accordingly, Applicants respectfully submit that Tsutomo does not disclose all of the elements of claim 17, *arranged as Applicant's arrange them*, and does not disclose the very important feature of heating a solid mixture of a silicon-containing compound and an alkaline substance at a temperature not higher than the melting point of the silicon-containing substance. Accordingly, Applicants respectfully submit that the

rejection is improper and should be withdrawn.

Turning next to claims 3 and 4, these claims depend directly or indirectly from claim 17 and introduce further claim elements. Because, as Applicants respectfully submit, Tsutomo does not disclose all of the elements of claim 17, arranged as Applicants have arranged them, Tsutomo cannot disclose all of the elements of claims 3 and 4. Accordingly, Applicants respectfully submit that the rejection is improper and should be withdrawn.

*Claim Rejections Under 35 U.S.C. § 103:*

Claims 5, 6, and 7 were rejected as allegedly obvious over Tsutomo et al., JP 315107. For the reasons set-out below, Applicants respectfully traverse.

For the reasons discussed above, Applicants respectfully submit that Tsutomo does not teach all of the elements of Applicants claims, arranged as Applicants arrange them, and Applicants respectfully submit that nothing in the Office's argument concerning claims 5, 6, and 7 cures this defect.

To establish *prima facie* obviousness, all claim limitations must be taught or suggested by the prior art. *See* M.P.E.P. § 2143.03. The Office has not advanced any argument to as to why Tsutomo would have taught or suggested to the skilled artisan of the day the process of mixing a silicon-containing substance and an alkaline substance and heating the mixture below the melting point of the

mixture; elements that are *per force* included in claims 5, 6, and 7. Because Tsutomo neither teaches nor suggest all of the elements of Applicant's claims 5, 6, and 7, the subject matter of these claims, as a whole, cannot be considered obvious. Accordingly, Applicants respectfully submit that, for at least this reason, the rejection is improper and should be withdrawn.

Claims 4 and 5 were rejected under 35 U.S.C. § 103(b) as allegedly obvious over Tsutomo in view of Poncelet et al., US 5,888,711. For the reasons set-out below, Applicants respectfully traverse.

Without acquiescing to the Office's characterization of the disclosure of Poncelet et al., Applicants respectfully point-out that the patentability of claims 4 and 5 does not rest solely on the recitation of the elements alleged to be taught or suggested by Poncelet et al. Claims 4 and 5 depend from claim 17, that, Applicants respectfully submit, contains patentable subject matter. Because claim 17 contains patentable subject matter, claims 4 and 5 depending therefrom likewise contain patentable subject matter and the subject matter of claims 4 and 5, as a whole, cannot be said to have been obvious at the time the invention was made. Accordingly, Applicants respectfully submit that the rejection is improper and should be withdrawn

Claims 8 - 13 were rejected under 35 U.S.C. § 103(a) as allegedly obvious

in view of Tsutomo, JP 3157101, in view of Poncelet, US 5,888,711. Because the Office appears to mischaracterize claim 8 as a product-by-process claim and further because neither Tsutomo nor Poncelet, alone or in combination, would have taught or suggested all of the elements of Applicants' claims 8 - 13, Applicants respectfully traverse.

Claim 8 is drawn to Applicants' inventive *process* for making Applicants' inventive flocculant. As Applicants best understand the rejection, the Office attempts to reverse the rationale applied to product-by-process claims: if the product is the same — an assertion with which Applicants vigorously disagree as presently applied to their inventive flocculant — the process for making the product is *prima facie* obvious. Applicants are not aware of any authority in statute or case law for this “reverse logic” and, for this reason alone, Applicants respectfully submit that the rejection is improper and should be withdrawn.

Even *if* Applicants *were* to accept this reverse logic, Applicants respectfully submit that the skilled artisan of the day would not have reasonably expected that the process disclosed in Tsutomo - which involves making a solution of slag containing acid-soluble silica, alumina, and calcium (*see* Abstract), would produce the same product provided by Applicants' inventive process, in which a silicon-containing substance and an alkaline substance are

mixed and heated *at* a temperature that, unlike melting of slag, *does not exceed* the melting point of the silicon-containing substance. Because there is no reasonable expectation that Applicant's inventive flocculant product is the same as any product taught or suggested by Tsutomu, alone or in combination with Poncelet, there is no basis for the "reverse logic" apparently applied by the Office. For this additional reason, Applicants respectfully submit that the rejection is improper and should be withdrawn.

Claim 14 was rejected under 35 U.S.C. § 103(a) as allegedly obvious over Tsutomu in view of Hasegawa. For reasons set-out below, Applicants respectfully traverse.

Claim 14 depends from claim 8 that, Applicants respectfully submit, contains patentable subject matter. Accordingly, Applicants respectfully submit that claim 14 also contains patentable subject matter and that the rejection is therefore improper and should be withdrawn.

Claims 15 and 16 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Kalinski et al., US 2,650,193. Claims 15 and 16 depend from claim 8 that, Applicants respectfully submit, contains patentable subject matter. Accordingly, Applicants respectfully submit that claims 15 and 16 also contain patentable subject matter and that the rejection is therefore improper and should



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be withdrawn.

*Conclusion:*

Based on the foregoing amendments and remarks, Applicants respectfully submit that the claims are in condition for allowance, which allowance is earnestly solicited.

If, in the opinion of the Examiner, a telephone conference would advance prosecution of the Application, the Examiner is invited to call the undersigned attorney.

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**NO FEE DUE/AUTHORIZATION TO DEBIT**

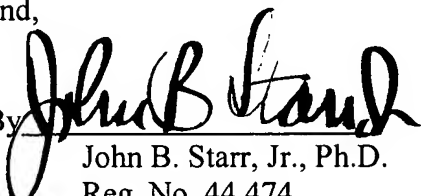
Applicants believe that no fee is due with this paper. If in fact a fee is due with this paper, the Commissioner is hereby authorized to debit such fee to Deposit Account No. 10-1250.

Respectfully submitted,

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